UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
805 SW Broadway, Suite 500
Portland, Oregon 97205

December 10, 2014

Mr. Scott Manzano
Oregon Department of Environmental Quality
Northwest Region Office
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Dear Mr. Manzano:

The Environmental Protection Agency has completed its review of the response to comments and revised Sampling and Analysis Plan for the Outfall 22B interim remedial action measure. We have attached for your consideration and use general and specific review comments compiled by the EPA and its contractor, CDM Smith.

The EPA's review has identified remaining issues with the objectives of the IRAM effectiveness monitoring as well as additional needs to assess long-term IRAM protectiveness of the Willamette River. The EPA and CDM Smith are available to meet with you at your convenience to discuss these comments and concerns.

Please feel free to contact me at (503)326-6554 or muza.richard@epa.gov regarding any questions that you might have on the EPA's review of the revised SAP for the Outfall 22B IRAM.

Sincerely,

Rich Muza
Remedial Project Manager

Enclosure

Review Comments
Response to Comments and Revised Draft Outfall 22B Sampling and Analysis Plan
Rhône Poulenc – Portland Site

General Comments:

1. The objective of the monitoring is to demonstrate that the Outfall 22B Interim Remedial Action Measure (IRAM) has addressed the Outfall 22B pathway. The Outfall 22B pathway includes both contaminant transport 1) inside the outfall and 2) along backfill of the outfall. Previous comments from both DEQ and EPA have stated that this second pathway needs to be addressed. This objective should be made clear in Section 1.0 of the revised SAP. Data collection should be adequate to meet this objective.

2. The revised SAP does not include adequate data collection to evaluate the preferential pathway along the backfill of the Outfall 22B storm sewer system with discharge to the Willamette River. Therefore, the planned data collection is not adequate to meet the objectives to address whether discharges from the Outfall 22B pathway pose a threat to the River. EPA recognizes that the revised SAP includes monitoring and sampling of seepage from around the outside of the outfall discharge to evaluate the effectiveness of the cutoff collar. However, this sampling is unlikely to provide a reliable or representative sample of groundwater in the pipe backfill due to difficulties in sampling of seepage and the potential mixing of groundwater and surface water during tidal cycles. Due to unknown contaminant concentrations in groundwater within the backfill and the potential for contaminated groundwater to travel below or around the cutoff collar, additional monitoring and sampling is needed. Monitoring wells should be installed in or directly adjacent to the backfill at locations directly upgradient and downgradient of the cutoff collar. The monitoring program should include water level and water quality monitoring at these wells. These data will provide the following lines of evidence that the cutoff collar is effectively working as intended:

    a. Water quality sampling results will indicate if contaminants are discharging to the river via preferential flow along the backfill.

    b. Water level data from the two installed wells will allow the cutoff collar to be evaluated in terms of its effectiveness in blocking a preferential pathway along the backfill of the outfall pipe and indicate when the outfall is below the water table at this location.

3. Under Section 3.2, it is stated that if one or more constituents in the outfall discharge exceeds the screening level value, then other lines of evidence (including discharge volume, constituent concentration, initial mixing and dilution in the receiving stream, and the potential for recontamination based on sediment in the discharge) would be used to evaluate whether the SLV exceedence poses an unacceptable risk to human health or the environment. It is unclear from Section 3.2 how these other lines of evidence will be used to make the determination of unacceptable risk and trigger the collection of additional data. The revised SAP should clearly state how the decision will be made and what levels of contaminants and flow rates will trigger the additional individual manhole sampling. The decision that there is unacceptable risk and a need for additional data collection should be made in consultation with the lead regulatory agency.

Specific Comments:

1. Section 2.0, Page 1, Last Paragraph – It is recommended that the revised SAP state the purpose of the planned video logging activities and additional information on how this work is to be performed. The date the guarantee of the liner expires should also be provided since this date starts the clock of the video inspection monitoring (5 years after expiration). It is recommended that the video inspections be

completed during periods of high groundwater level but preceded by a minimum of 72 hours of no rainfall; this will allow for identification of locations of groundwater infiltration.

2. Section 2.2, Page 2 – It is recommended that a standard operating procedure for using the Marsh McBirney flow meter to measure flow be included with a draft final SAP. The SOP should also describe the standard conduit flow rate calculations that are referenced in this section of the document.

3. Section 2.4, Page 3, Third Paragraph -- Many of the method reporting limits presented in Attachment C Table 2 are higher than the screening level values presented in Attachment C Table J-1. For example, the MRL for arsenic, cadmium, lead, and silver is listed as 1 to 2 micrograms per liter (µg/L), respectively, but the SLVs in Table J-1 are 0.014, 0.09, 0.54, and 0.12 µg/L, respectively. Another example regarding organic contaminants includes vinyl chloride and 1,4-dichlorobenzene having a listed MRL of 0.5 µg/L; however, the SLVs for these two compounds are 0.016 and 0.43 µg/L, respectively. It is recommended that the MRLs for each constituent listed in Attachment C Table 2 be checked to ensure that each SLV is met. In accordance with the Portland Harbor Joint Source Control Strategy, StarLink should evaluate whether alternative sampling approaches or alternative laboratory methods can be used to achieve MRLs meeting the SLVs. When two or more analytical methods are available, it is recommended that the method with the lowest reporting limit be used.

4. Section 3.2 – It is recommended that the draft final SAP describe the methods and criteria for evaluating the monitoring results for seepage around the outside of the outfall, including criteria and decision steps for additional seepage or groundwater monitoring, sampling, or corrective action.

5. Section 3.2, Page 4, First Bullet -- As stated in EPA's comments on the original SAP, effluent samples collected from Outfall 22B should also be screened against the specific cleanup values that EPA is developing as preliminary remediation goals for the Portland Harbor Superfund Site for protection of the Willamette River. It is recommended that this issue be resolved in the draft final SAP.

6. Section 3.2, Page 4, Third Paragraph – It is recommended that the revised SAP state the timing and frequency of the additional sampling of individual manholes.